

A NEW SUBTERRANEAN RHIZOECUS MEALYBUG
FROM ARIZONA

(Homoptera: Pseudococcidae)

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Each summer the University of California conducts a required undergraduate course in Entomology (Entomology 49), which deals primarily with the collection, identification and preservation of miscellaneous insects. During the summer of 1958 this course was held at the Southwestern Research Station of the American Museum of Natural History, which is approximately six miles northwest of Portal in southern Arizona. At that time Dr. Richard M. Bohart, Vice-Chairman of the Department of Entomology and Parasitology of the University of California, was in charge of the course. Among insect collections made by Dr. Bohart was a soil sample collected five miles southeast of Apache, in Cochise County, Arizona. The collected soil was processed in a Berlese insect trap and, among other arthropods, a single adult female hypogeic mealybug was recovered.

Due to the effort made by Dr. Bohart in procuring the mealybug, the author takes great pleasure in dedicating the species in his honor.

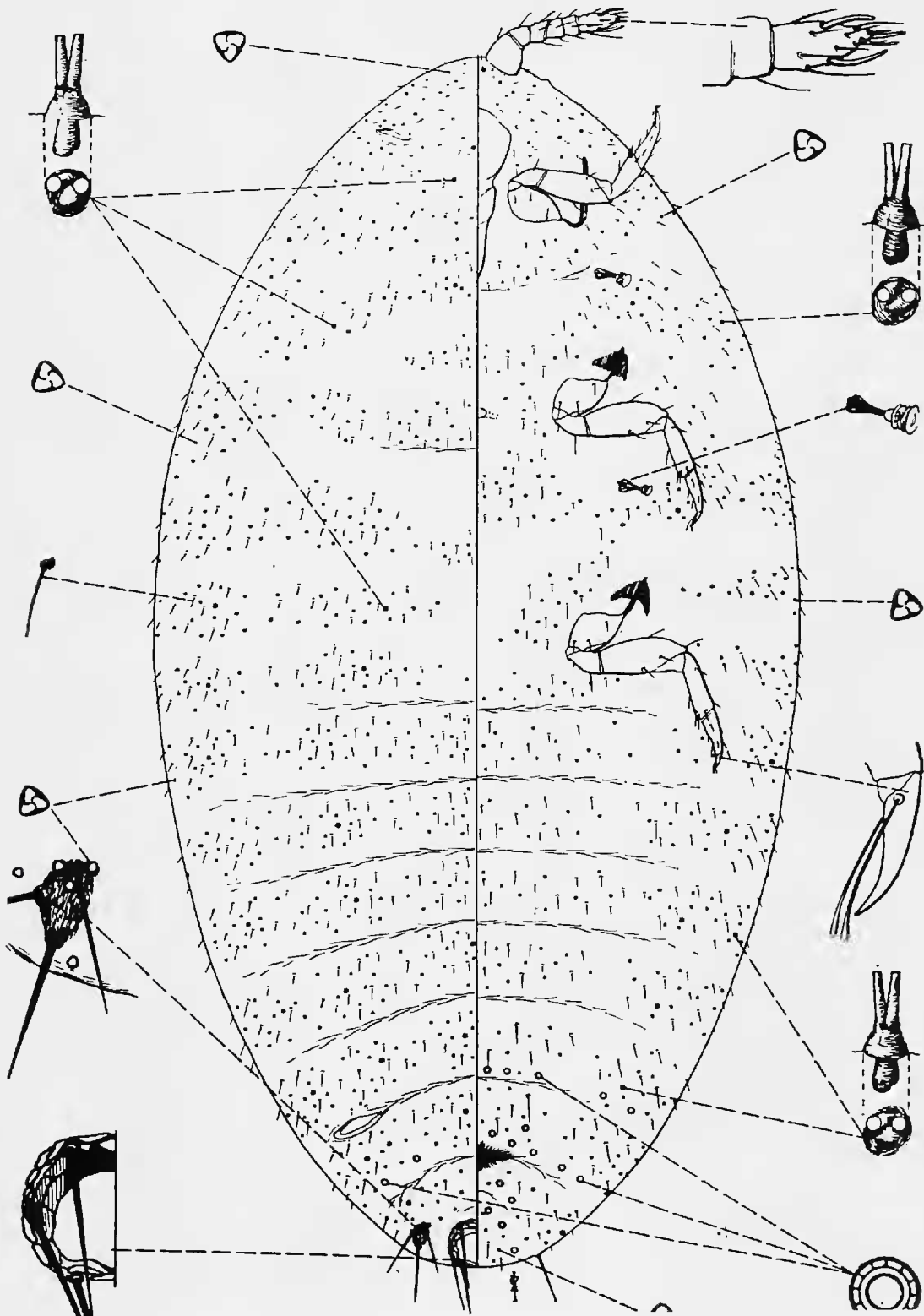
Rhizoecus boharti McKenzie, new species

(fig. 1)

Recognition characters—Adult female.—elliptical, broadened across the middle. Length approximately 1.20 mm. Cerarii entirely lacking on dorsum; anal lobes with several slender setae set in a quite distinct, but small, area of sclerotization. Bitubular pores rather small and inconspicuous, little larger than a trilocular pore, seemingly formed of a sclerotized cone from the apex of which arise two sclerotized tubes; these pores totalling as many as 54 for the entire dorsum. Dorsum moderately beset with trilocular pores and small body setae. Oral collar ducts lacking. Dorsal multilocular disk pores present in few numbers along posterior border of eighth abdominal segment. Anal ring borne at apex of abdomen, its six setae slightly longer than greatest diameter of ring, its pores large, oval and irregularly shaped, some appearing clear and open, others with varying amounts of pigmentation. Dorsal ostioles well-developed.

Ventrally, multilocular disk pores present from tip end of abdomen to posterior margin of seventh segment. Bitubular pores few, apparently confined to a series along body margin, extending from posterior abdomen to head region, apparently the same size as those of dorsum. Trilocular pores generally distributed on venter, but showing rather marked "clear areas" submarginally on abdomen and in thoracic region. Ventral oral collar ducts lacking. Setae on venter short and slender.

Circulus lacking. Eyes present. Antennae six-segmented, quite short and stout, apical segment bearing four sensory setae; placed close together near apex of head, interantennal space equal to slightly less than width of first antennal segment at its base. Legs comparatively stout, tibia and tarsi armed with stout spines. Tarsal claws with digitules exceeding apex of claw and very slightly knobbed.



EXPANATION OF FIGURE

Fig. 1. *Rhizoecus boharti* McKenzie, new species, collected in soil, 5 miles southeast of Apache, Cochise County, Arizona.

Holotype adult female, collected in soil, FIVE MILES SOUTHEAST OF APACHE, COCHISE COUNTY, ARIZONA, August 11, 1958, by R. M. Bohart, deposited in the University of California, Department of Entomology and Parasitology Museum Collection at Davis, California. Unfortunately, this lot represents the only known collection of the mealybug.

Using Ferris' key to North American species of *Rhizoecus* as presented in his 1953 Atlas of the Scale Insects of North America, Volume VI, page 427, this species runs to couplet 12 (11) including *Rhizoecus associatus* (Hambleton) and *R. distinctus* (Hambleton). However, it is quite different from these two species in possessing bitubular instead of tritubular pores, and lacking dorsal and ventral multilocular disk pores in the thoracic region.

It is related to *Rhizoecus kondonis* Kuwana, in the possession of bitubular pores, but differs from that species in lacking a circulus, possessing digitules which extend beyond apex of claw, and by the presence of a few multilocular disk pores along posterior margin of eighth abdominal segment.

Habits.—No information other than that the mealybug occurs in the ground where it presumably feeds on plant roots.

Suggested common name.—Bohart *Rhizoecus* mealybug.

The accompanying illustration was made, under the author's supervision, by Mrs. Julia Z. Iltis.

BOOK REVIEW

THE BEETLES OF THE PACIFIC NORTHWEST. PART II: STAPHYLINIFORMIA, by Melville H. Hatch, with the collaboration of Milton W. Sanderson and Gordon Marsh. University of Washington Publications in Biology, Vol. 16, pp. xii + 384, bound, offset. Published December 27, 1957. Price \$7.00, from the University of Washington Press, Seattle 5.

Volume I of this important series was reviewed in this journal in 1956. Volume II covers the families Silphidae, Leptinidae, Leiodidae, Staphylinidae, Scydmaenidae, Scaphidiidae, Clambidae, Corylophidae and Ptiliidae, in that sequence. The subfamily Steninae of the Staphylinidae, with three new species, is treated by Dr. Sanderson, the family Scydmaenidae, with eight new species, by Mr. Marsh. The genus *Brathinus* is included in the tribe Anthrophagini of the staphylinid subfamily Omaliinae. Pages 302–375 comprise 37 plates with their explanations; page *ii* is a frontispiece, figuring *Nicrophorus investigator* (Zetterstedt) by Daniel Bonnell.

This book is exceedingly helpful for anyone working over material from